CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM NO. R6V-2005-0011
WDID NO. 6B369807003

FOR

MOLYCORP, INC., MOUNTAIN PASS MINE AND MILL
FACILITY DISPOSAL OF WASTE TO LINED AND UNLINED PONDS

San Bernardino County

I. MONITORING

The Discharger's Detection Monitoring Program shall comply with the monitoring provisions contained in Section 20385 through 20430 of Title 27, California Code of Regulations. In addition to satisfying the monitoring requirements of Title 27, the Discharger shall also perform the following monitoring:

A. Flow Monitoring

The Discharger shall measure and record:

1. The volume of flow, in million gallons, that occurred each month for each of the wastewater streams listed in Table No. 1 (Attachment A);

2. The average flow rate, in gallons per minute, that occurred each month for each of the wastewater streams listed in Table No. 1 (Attachment A);

3. Weekly, the freeboard measured from the top of the lowest part of the dike to the wastewater surface in each evaporation pond. If the pond is dry, indicate this in the monitoring report.

4. Monthly, volume of wastewater discharged to the Office Landscape Pond.

5. Yearly, calibrate the wastewater flow meters.

B. Solid Waste Sampling

All solid waste samples collected under this Monitoring and Reporting Program shall be analyzed to determine the concentrations of parameters described in Table No. 2 (Attachment B).

1. Onsite Evaporation Ponds

a) Quarterly, the Discharger shall collect a composite sample of settled solids (salts) from the OEP containing the highest total dissolved solids. The composite sample shall consist of eight equal-volume grab samples that have been combined and mixed. The eight grab samples shall be collected at points representative of the salts located within the OEP. The samples

shall be analyzed to determine the concentrations of parameters described in Table No. 2 (Attachment B).

b) Monthly, the Discharger shall collect discrete samples for compositing of settled solids (salts) from the OEP containing the highest total dissolved solids. The composite sample shall consist of eight, equal-volume grab samples that have been collected over a time period of not less than one hour, but not greater than 24 hours for the entire eight samples, which shall be combined and mixed. The eight grab samples shall be collected at points representative of the salts (solids) within the OEP. The samples shall be analyzed to determine the concentrations of mercury and lead. Monthly sampling shall be preformed for one year. After one year, if concentrations have shown significant increase to significant higher levels, then the Discharger shall implement a remediation plan. Monthly sampling shall continue until remediation has been completed and preventative measures are shown to be effective.

c) Salt samples shall be tested and analyzed in accordance with Section 66261.24, Title 22, California Code of Regulations (22CCR§66261.24) using:

i The Waste Extraction Test (WET) if the total concentration for a constituent in the sample exceeds 10 times the Soluble Threshold Limit Concentration (STLC), and

ii The Toxicity Characteristic Leaching Procedure (TCLP) (as listed in U.S. Code Part 40, 261.24) if the total concentration for a constituent in the sample exceeds 20 times the TCLP limit.

C. Wastewater

All wastewater and groundwater samples collected under this Monitoring and Reporting Program shall be analyzed to determine the concentrations of parameters described in Table No. 2 (Attachment B).

1. Landscape Pond

Monthly, for the first year of discharge, a random grab sample from the Landscape Pond shall be collected and analyzed to determine the concentrations of the analytes listed in Table 2 (Attachment B). After one year of monthly sampling, quarterly sampling of the treated wastewater shall be performed.

2. Onsite Evaporation Ponds

Quarterly, the Discharger shall collect grab samples of wastewater located within the Ponds as follows: If there is only one pond containing wastewater only one grab sample is required. If there are two Ponds containing wastewater two grab samples are required. In the event there are more than two ponds containing wastewater, the Discharger shall first collect a grab sample from each pond containing wastewater and analyze the sample for total dissolved solids. The Discharger may use a field method such as conductivity instead of the laboratory total dissolved solids method, provided

the Discharger can demonstrate a sufficiently accurate and precise correlation between the field method and the laboratory method. The Discharger shall then select the Pond with the lowest total dissolved solids and the Pond with the highest total dissolved solids. The Discharger shall then collect grab samples of wastewater located within each of these two Ponds. The samples shall be analyzed to determine the concentrations of parameters described in Table No. 2 (Attachment B).

3. Other Wastewater Streams

The Discharger shall collect grab samples of the wastewaters described in Rows 1 through 12 of Table No. 1 (Attachment A). The samples shall be analyzed to determine the concentrations of parameters described in Table No. 2 (Attachment B). Sampling frequencies for these respective wastewater streams are listed in Table 2.

D. Detection Monitoring

The Discharger shall conduct a Detection Monitoring Program to provide the best assurance of the early detection of any new releases from the Discharge sites.

1. Unsaturated Zone Monitoring

Monthly, the unsaturated zone monitoring system for each pond shall be inspected to determine if moisture is present. The results shall be reported each quarter.

2. Groundwater Monitoring

a) Quarterly, the Discharger shall collect samples from each groundwater monitoring well listed in Table A below and shown on map as Attachment C. The samples shall be analyzed to determine the concentrations of parameters described in Table No. 2 (Attachment B). Groundwater shall also be measured for:

i. electrical conductivity (E_c) (in μmhos/cm units),
ii pH (in pH units), and
iii Temperature (in either degrees Fahrenheit or degrees Centigrade).

b) Quarterly, the Discharger shall measure and record the depth below the ground surface and the elevation above mean sea level of the groundwater surface in the groundwater monitoring wells listed in Table A below.

c) Quarterly, the Discharger shall plot the above-described elevations and elevation isopleths on a 11" x 17" copy of a site plan, which shows the locations of the site and monitoring wells.

d) Quarterly, the Discharger shall calculate and record the groundwater gradient, the direction of the gradient, and velocity of groundwater flow.

3. Groundwater Concentration Limits

The Discharger has collected background water quality data for the monitoring parameters contained in this Monitoring and Reporting Program. The concentration limits for each constituent of concern shall be established pursuant to Section 20400, Title 27, California Code of Regulations.

TABLE A
Groundwater Monitoring Wells

WELL NO.	TYPE	LOCATION
98-10RMW	Background Groundwater Monitoring Well	Upgradient
98-5RMW	Groundwater Monitoring Well	Downgradient
98-9RMW	Groundwater Monitoring Well	Downgradient

E. Dikes and Liners

Monthly, the integrity of the dikes and liners in each evaporation pond shall be checked. Should the inspection indicate any unauthorized discharge has occurred or may occur, the Regional Board shall be notified immediately by telephone followed by confirmation in writing.

F. Leachate Collection and Removal Systems (LCRSs)

The Discharger shall conduct the following inspections/testing of the LCRS:

1. Visual inspection for liquid in the leakage detection sumps shall be conducted each week. The results of those inspections shall be recorded in a permanent logbook kept onsite.

2. Any volume of liquid pumped out of the leakage detection sumps shall be recorded along with date, time and discharge location in a permanent logbook kept on-site.

3. If present, leachate samples shall be collected and tested for algaecide compounds if algaecide application has occurred at anytime prior.

4. The LCRSs shall be tested at least once annually to demonstrate proper operation. The results of the testing shall be submitted in the annual monitoring reports. The annual report shall include a description of the method used to test the LCRSs.

G. Operation & Maintenance

A brief summary of any operational problems and maintenance activities shall be submitted to the Regional Board with each monitoring report for Mountain Pass Operations. This summary shall discuss:

1. Any modifications, additions, or major maintenance to the wastewater conveyance system, treatment facilities, or disposal facilities.

2. Any major problems occurring in the wastewater conveyance system, treatment facilities, or disposal facilities.

3. The calibration of any wastewater flow measuring devices.

II. DATA ANALYSIS

A. General Statistical Analysis Method

The report titled "Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities" (U.S. EPA, 1989), shall be used to select the statistical test to use for comparing detection monitoring well data to background monitoring data. If more than 50 percent of the observations in the detection monitoring wells are below the detection limit, then the Test of Proportions will be used. If more than 50 percent are above the detection limit, then a One-Way Analysis of Variance (ANOVA) will be used (i.e., Bartlett's Test for Equality of Variances). For multiple well computations the computed F Statistic will be compared to the tabulated F Statistic at the five (5) percent significance level. If the calculated F value exceeds the tabulated value, then the hypothesis of equal means will be rejected. The Bonferroni t-Statistics will be computed to determine if the significant F is due to differences between background and compliance wells at the five (5) percent significance level.

B. Site Specific Statistical Analysis Method

The Executive Officer may approve statistical methods, which are different than the general methods listed in this Monitoring and Reporting Program provided that such methods are capable of determining a statistically significant release from the Landfill.

III. REPORTING

A. General Provisions

The Discharger shall comply with the “General Provisions for Monitoring and Reporting,” dated September 1, 1994, which is attached to and made a part of this Monitoring and Reporting Program (Attachment C).

B. Violations

If monitoring data indicate violation of Waste Discharge Requirements, the Discharger shall provide information indicating the cause of violation(s) and action taken or planned to bring the discharge into compliance.

C. Failure to Furnish Reports

Any person failing or refusing to furnish technical or monitoring reports or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation under Section 13268 of the California Water Code.

D. Quarterly Reports

Monitoring reports including the preceding information shall be submitted to the Regional Board on the **30th day of the month following each quarter**.

E. Algaecide Use

The Discharger shall report on the **30th day of the month following each quarter**, the type, volume, frequency, and method of application of algaecide used.

F. Annual Report

By **March 30** of each year, the Discharger shall submit an annual report to the Regional Board with the following information:

1. The compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the discharge requirements.

2. Evidence that adequate financial assurance for closure is still in effect. Evidence may include a copy of the renewed financial instrument or a copy of the receipt for payment of the financial instrument. Evidence of adequate financial assurance shall be signed by the Corporate Officer.

3. Evidence that adequate financial assurance amount is adequate or increase the amount of financial assurance by the appropriate amount if necessary, due to inflation, a change in the approved closure plan, or other unforeseen events.

4. Graphical and tabular data for the monitoring data obtained for the previous calendar year (January – December).

5. Calibration methods and any flow discrepancies of the wastewater flow meters after calibration is performed.

Ordered by: _____ Dated: _____

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: A. Table 1. Wastewater Streams
B. Table 2. Parameters for Laboratory Analyses/Sampling Frequency
C. Map locations of Groundwater Monitoring Wells – On-site Evaporation Ponds
D. General Provisions for Monitoring and Reporting Program